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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/159,748	09/23/1998	GEOFF BARRETT		5513

7590 08/09/2005

DRISCOLL OR MORRIS  
WOLF GREENFIELD & SACKS  
FEDERAL RESERVE PLAZA  
600 ATLANTIC AVENUE  
BOSTON, MA 022102211

EXAMINER
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THOMSON, WILLIAM D

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 08/09/2005

21

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/159,748

Applicant(s)

BARRETT, GEOFF

Examiner

William D. Thomson

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2004 and 05 May 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2,6 and 8-11 is/are allowed.
- 6) ☒ Claim(s) 1,3-5, and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 C.F.R. 1.114***

1. A request for continued examination under 37 C.F.R. 1.114, including the fee set forth in 37 C.F.R. 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R. 1.114, and the fee set forth in 37 C.F.R. 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R. 1.114. Applicant's submission filed on May 12, 2003 has been entered.

2. Claims 1-11 have been submitted for examination.

3. Claims 2,6 and 8-11 have been allowed, and claims 1, 3-5, and 7 have been rejected.

### ***Priority***

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119 (a)-(d). A certified copy has been filed in the instant case. Foreign priority date is 09/29/97.

### ***Information Disclosure Statement***

5. The information disclosure statement (IDS) submitted on May 20, 2005, is being considered by the examiner. However, it is noted that this is not the first time the Examiner has initialed and signed an IDS listing these non-patent literature references. These are the same references considered by the examiner as listed on the October 13, 1998 IDS statement. It is also noted that Applicant was providing the art to discharge

their duty to disclose the prior art in combination with the newly presented Examination report dated December 1, 2004. Examiner has considered this report.

### ***Drawings***

6. The drawings were received on November 12, 2002 have been entered and are acceptable for examination purposes. Examiner thanks the applicant for amendments to the drawings and the claims, and providing a new figure 8. Examiner withdraws the prior objections to the drawings. New corrected drawings in compliance with 37 C.F.R. 1.121(d) are required in this application because these are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Response to Arguments***

8. Applicant's arguments with amendments, see pages 9-12 with amendments to the specification, claims and related figures, filed May 5, 2003, with respect to the 112 rejections, prior art rejection and drawing have been fully considered and are persuasive. The rejections and objections have been withdrawn. However, the examiner points out that AHO in section 4.4 specifically teaches parsing the BDD using "top down" and whether the implementation is for software or hardware carries very little

weight since it is well established that anything that is implemented in hardware can also be implemented in software, as well as the other way around.

7. Examiner withdraws the rejections under 35 U.S.C. § 112 to claims 1-11. Applicant's have provided effective arguments that the limitations are disclosed in the specification and based upon the level of skill in the art, looking to the known prior art for example, and taking into consideration that fact that the majority of steps recited in both the claims and specification are known in the art, less the top down and selected ordering, therefore these rejections are not sustainable.

***Claim Rejections - 35 U.S.C. § 101***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-5 and 7 are newly rejected under 35 U.S.C. 101 because they are disembodied and merely algorithmic in their nature where these method claims could be implemented through mental steps and/or constructed on paper with pencil, and are not limited to being performed by a computer or a machine. See *In re Meyer and Weissman*, 215 USPQ193 (CCPA 1982), *In re Walter*, 205 USPQ 397 (CCPA 1980), *Arshal v United States* 208 USPQ 397 (US Cl Ct 1980), *In re Sarkar* 200, USPQ 132 (CCPA 1978), *In re Musgrave*, 431 F. 2<sup>nd</sup> at 893 167 USPQ 280 (CCPA 1970) and *In re Foster*, 438 F. 2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971).

However, this rejection could be overcome by amending the method claims to include language like: "A computer implemented method", as long as the computer implementation is supported by the specification.

***Allowable Subject Matter***

10. Claims 2, 6, and 8-11 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not expressly teach or render obvious the limitations directed to the operation of sifting in the selected order with traversing the representation of the graph from the top down to produce a list of labels in the selected order for hardware systems and embodied in an apparatus; in combination with the remaining recited limitations as recited in claims 2, 6, and 8-11. The apparatus is operated to perform these specific operations consistent with the specific underlying hardware for representing other hardware as a BDD.

The use of sifting (all the prior art), depth-first (AHO), top-down parsing (AHO) with a BDD (all the prior art) for reduction and designing of hardware is well developed in the prior art, dating back to at least 1959. However the specific combination of operations embodied in hardware, as recited in all the independent claims has not been expressly taught in the prior art teachings.

If applicant amends the claims 1, 3-5, and 7 to overcome the outstanding 101 issues, those claims will also be allowed for the same reasoning.

***Conclusion***

11. The prior art made of record, on the PTO 892, and not relied upon is considered pertinent to applicant's disclosure.

**CONTACT INFORMATION**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William D. Thomson whose telephone number is 571-272-3718. The examiner can normally be reached on 8:30-3:30 Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William Thomson  
Primary Examiner  
Technology Center 2100  
AU 2123